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16712R (March 2002)

Superseding
STAR-11165R (June 2001)
RST-11165 (08/00)

GUIDE SPECIFICATION FOR CONSTRUCTION
Specification revised to meet U.S. Army Reserve requirements (June 2001)
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DIVISION 16 - ELECTRICAL

SECTION 16712R

INFORMATION TECHNOLOGY (IT)

03/02

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DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS

CEGS-16712R (March 2002)

Superseding
CEGS-16712R (August 2000)

GUIDE SPECIFICATION FOR CONSTRUCTION

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SECTION 16712R

INFORMATION TECHNOLOGY (IT)
03/02

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NOTE: This guide specification covers the requirements for place scope here. This guide specification is to be used in the preparation of project specifications in accordance with ER 1110-1-8155.

Comments and suggestions on this guide specification are welcome and should be directed to the proponent of the specification. The e-mail address is John.W.Byron@lrl02.usace.army.mil. Use of electronic communication is encouraged.

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PART 1 GENERAL

1.1 REFERENCES

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NOTE: Issue (date) of references included in project specifications need not be more current than provided by the latest change (Notice) to this guide

specification. During the reference reconciliation process, SPECSINTACT will automatically remove references from this paragraph that have been removed from the text.

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The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI/TIA/EIA-568-A-1995 TIA/EIA STANDARD, Commerical Building Telecommunications Cabling Standard. (1995)

ACRONYM REF-ID (issue/revision date) Publication Title

1.2 SUBMITTALS

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NOTE: Submittals must be limited to those necessary for adequate quality control. The importance of an item in the project should be one of the primary factors in determining if a submittal for the item should be required.

Indicate submittal classification in the blank space following the name of the item requiring the submittal by using "G" when the submittal requires Government approval. Submittals not classified as "G" will show on the submittal register as "Information Only". For submittals requiring Government approval, a code of up to three characters should be used following the "G" designation to indicate the approving authority; codes of "RE" for Resident Engineer approval, "ED" for Engineering approval, and "AE" for Architect-Engineer approval are recommended.

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Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-03 Product Data

Provide Catalog Information for the Following Items
Cat 5 Cable; G
19 Inch Equipment Racks; G
Lan Cable; G
Power Strips; G
Fiber Optic Cables; G

RJ-45 Jacks, Covers and Boxes; G
Cable Trays; G
Static Free Floor; G
Dry Transformers (K Rated); G
Electric Panels; G

Text explaining details of information to be submitted is contained in Section 01330

PART 2 PRODUCTS

2.1 INFORMATION TECHNOLOGY (IT) EQUIPMENT.

2.1.1 Cat 5 Cable

All Cat 5 cable shall be as specified in Section 16710.

2.1.2 Lan Cable

All LAN cable shall be as specified in Section 16710.

2.1.3 Fiber Optic Cable

All Fiber Optic cables shall be as specified in Section 16710.

2.1.4 Cable Trays

All cable tray shall be as specified in Section 16415.

2.1.5 Dry Transformers (K Rated)

All Dry type Transformers shall be K Rated (100%) as specified in Section 16415.

2.1.6 19 Inch Equipment Rack

See specification Section 16710.

2.1.7 Power Strip

Power strips shall contain six outlets each and one shall be located on each side of the 19 inch racks.

2.1.8 RJ-45 Jacks, Boxes and Covers.

All data and phone jacks shall be RJ-45 as specified in Section 16710.

2.1.9 Static Free Floor

The Static Free Floor shall be as specified in Section 09660.

2.1.10 Electric Panels

Electrical panels shall be 120/208 volts, 3 phase, 225 Amper bus, 42 poles,

4 wire as specified in Section 16415.

PART 3 EXECUTION

3.1 FACILITY REQUIREMENTS.

3.1.1 Network Operations Center (NOC)

In each Network Operation Center install 19 inch industrial racks as shown on the detail sheets. Within each rack, install two seperate 20 Amp circuits, terminate them into vertically rack-mounted multiple-outlet power strips. [For RSC Headquarters and DRC IT Control Facilities install Racks 1 & 2 within rack-suite #3,in addition to the power strips, two seperate 20 Amp circuits each, and terminate both racks into standard 20 Amp outlets. Install a vertical ground bus within each rack.

3.1.2 Office for NOC Staff

The office shall contain the number of work stations as shown on the drawings.

3.1.2.1 Work space for NOC Staff

The work bench space shall contain a standard electronic workbench as shown on the drawings. Surface must be impact absorbing and non-conductive. Install two 20 Amp cicuits terminating into a multiple-outlet power strip. Mounted the power strip horizontally above the surface of the work bench. Install an electrical ground bus horizontally on the wall above and behind the workbench. Offset bus from wall by 2 inches to allow for temporary connection by screw, clamp or 'alligator clip'.

3.1.3 Classified NOC

The Classified NOC shall contain sepertate 20 Amp Electrical circuits for the data processing equipment(s) and the printer(s).

3.1.4 Telephone Control Room.

The Telephone Control Room shall have 3/4" thick (fire retartent) plywood mounted on the walls as shown on the drawings. At each sheet of plywood a 20 Amp circuit and a # 6 ground cable (long enought to go around the plywood board) shall be provided. 19" industrial rack(s) shall also be installed as shown on the drawings with circuits as required in paragraph 3.1.1

3.1.5 Electrical Closet.

The Electrical Closet shall contain a 480 volt disconnect, K rated transformer and 120/208 volt panels as shown on the drawings. All netural conductors ran from any panel within this room shall be one size larger that the other conductors with in the circuit.

3.2 Cable Installations

3.2.1 Fiber Optic Cables (Red).

Install one multi-mode, 62.5/125 micron duplex fiber optic cable to each workstation location for classified ('Red') network operations, with SC terminations.

3.2.2 Fiber Optic Cables (Black).

Install one multi-mode, 62.5/125 micron duplex fiber-optic cable to each workstation location for unclassified ('Black') network operations, with SC termination.

3.2.3 Data Cable.

Install Category 5 Unshielded, Twisted Pair (CAT 5 UTP) cable from the IT wiring closet to each workstation for unclassified ('Black') network operations. Terminate at each remote location with RJ-45 connectors, to EIA/TIA 568B specifications.

3.2.4 Phone Cables.

Install Catagory 5 Unshielded, Twisted Pair (CAT 5 UTP) cable from the IT Wiring Closet to each workstation with RJ-45 connectors, to EIA/TIA 568B specificvations.

3.2.5 Multi-Mode Fiber Optic Cable.

For every 12 remote LAN drops serviced by an IT Wiring Closet, install a seperate 62.5/125 micron, Multi-Mode fiber-optic duplex cable. 'Homerun' the fiber-optic cable from each IT Wiring closet directly to the Network Operations Center. Terminate the fiber-optic cable with ST connectors. Install approximately 25% spare fiber-optic cables for each IT Wiring closet.

3.3 DATE OF TEMPLATE

The date of this template is 15 June 1999. This template will be updated from time-to-time to reflect current requirements.

-- End of Section --